



Aquatic Invasive Species Sentry Program



Help Protect St. Louis County Waters -

Become an Aquatic Invasive Species Sentry!

Funding for the AIS Sentry Program provided through St. Louis County's

Aquatic Invasive Species Prevention Program



Additional support and resources for the AIS Sentry Program are provided by Minnesota Sea Grant and the Department of Natural Resources.



AIS Sentry Program Vision:

The AIS Sentry Program educates and empowers community members to recognize and report aquatic invasive species throughout St. Louis County. The AIS Sentry Program helps prevent & limit the spread of AIS in waters throughout St. Louis County.



What are aquatic invasive species?

Aquatic invasive species (AIS) are non-native plants, animals and pathogens that live mainly in water. AIS tend to thrive in waters where they are introduced due to the absence of natural predators. AIS can quickly outcompete native plants and animals posing a major threat to our natural resources, economy and public health.



Education is essential in preventing new introductions and spread of Aquatic Invasive Species throughout St. Louis County waters.

You Can Help—become a St. Louis River Alliance Aquatic Invasive Species Sentry.

By becoming a volunteer Aquatic Invasive Species Sentry you will **help protect** the waters of St. Louis County by learning:



- how to identify AIS along with native species
- impacts of AIS
- how they spread
- early detection, survey and reporting methods

Anyone can be an Aquatic Invasive Species Sentry—no prior knowledge or experience is necessary!

Aquatic Invasive Species Sentry Program

Aquatic Invasive Species Sentries **survey** waterbodies within St. Louis County for new introductions of AIS while learning about native aquatic plants, animals and their habitats.

Participants:

- partake in a workshop led by expert AIS instructors (MN Sea Grant/MN DNR);
- agree to document and report survey results in accordance with standardized methods
- During the summer season, conduct at least two surveys on waterbodies found within St. Louis County on the presence/absence of aquatic invasive plants, and animals.



Aquatic Invasive Species Sentry Workshops:

The St. Louis River Alliance will be holding AIS Sentry Workshops beginning in the spring of 2016. A registration fee of \$30 is required for all participants. To become an AIS Species Sentry participants are required to attend the classroom workshop before participating in a field workshop. Participants are asked to bring their own canoe or kayak to field workshops. Please indicate on the registration form or contact us if you are unable to bring a canoe. We do have a limited number of canoes we can offer participants.

*******WORKSHOP STRUCTURE*******

In these workshops participants will learn:

- Basic lake and river ecology;
- How to identify common aquatic plants and animals, both native and invasive;
- How invasive species are introduced, and their impacts on our natural resources, economy and human health;
- How to conduct surveys of native and invasive species in the field (on the water);
- How to record data and report findings.

**Workshops will be taught by MN SeaGrant and MN DNR staff with support from the St. Louis River Alliance.

We are currently taking registrations for AIS Sentry Classroom Workshops listed below:

Classroom Workshop Dates & Locations:

Saturday, April 22, 2016. 8:30 am - 12:00 pm & 1:00 pm - 4:30 pm

Location: University of Minnesota, Duluth.

31 W College St, Duluth, MN 55812

Additional Workshops Dates coming soon.

For More Information about participating in an AIS Sentry Workshop Please Contact:

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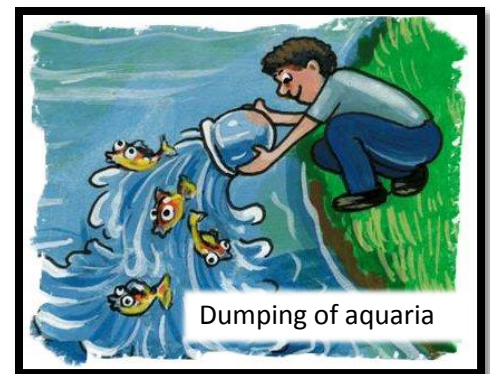


How are aquatic invasive species introduced?

Aquatic invasive species are introduced through several ways. Some introductions are for

specific purposes such as controlling aquatic plants, dumping of home aquaria, and planting ornamentals in gardens. Unfortunately most aquatic invasive species introductions have been unintentional, such as through the discharging of ballast water.

(Ballast water is water that is pumped into tanks on ships to help stabilize the ship during loading or unloading of cargo). Other means of unintentionally introduced AIS involve; dumping of bait buckets, moving watercraft, equipment and gear from one waterbody of water to another and by also scuba diving and waterfowl hunting gear.



What are the impacts of aquatic invasive species and How are they affecting St. Louis County Waters?

Aquatic invasive species have an impact on our **local economy**, **natural resources**, and possibly **human health**. For example:



Zebra mussels (*Dreissena polymorpha*) introduced into Lake Superior in the 1980's and present in the St. Louis River Estuary can cause damage to infrastructure, boats, and disrupt ecosystems. Zebra mussels are a relatively small freshwater bivalve, with a d-shaped striped patterned shell, approximately 2 – 4 cm long. Zebra mussels attach themselves to surfaces using sticky threads (byssal threads) forming dense colonies which can, obstruct water intake

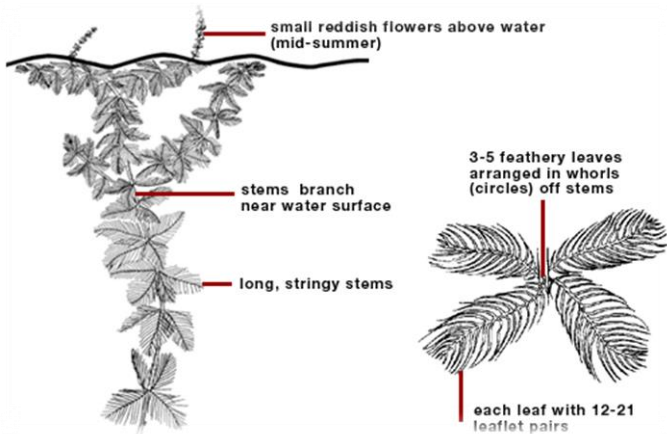
and outflow pipes, and cause damage to boat hulls and props—costing thousands of dollars annually. Zebra mussel shells also litter beaches, making it difficult for the public to access the beach and water. Due to their capability of forming large colonies as well as being filter feeders—Zebra mussels can alter lake and river ecosystems by outcompeting native fish for food. This poses a threat to native game fish—reducing available food for young fish.



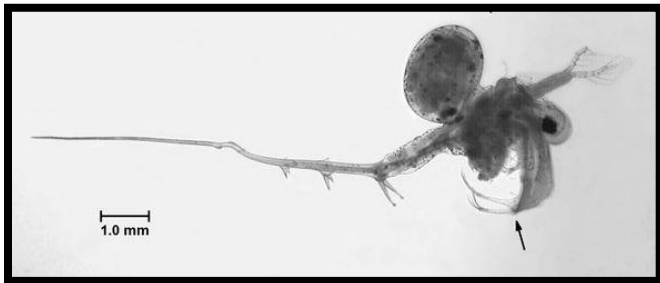


Eurasian watermilfoil (*Myriophyllum spicatum*) is an aquatic plant that lives under the water. Eurasian watermilfoil was listed as an aquatic invasive species in the St. Louis River in 2007. It generally grows in lakes with water depths up to 15 feet deep, and is also found in ponds and slow moving streams. Eurasian watermilfoil is a flowering perennial that grows to a length of 50 – 70 cm. Eurasian watermilfoil outcompetes native plants forming

dense mats at the surface. These dense mats create difficult water conditions for; boat access, fishing and swimming. Additionally the dense mats created by eurasian watermilfoil, block out sunlight, preventing native species of plants from growing, thus disrupting the lake or river ecosystem. Eurasian watermilfoil is spread from one body of water to another by seed and by plant fragments that can become attached to boat trailers and equipment.



Spiny waterfleas (*Bythotrephes longimanus*) were listed as an aquatic invasive species in the St. Louis River in 1990. The spiny waterflea is a small (1 cm long) aquatic crustacean with a clear body and long barbed tail. The head has a single large dark eye. Spiny waterfleas form jelly-like clumps on fishing line, fouling fishing gear and equipment. They live in the water column where they feed on native zooplankton—



reducing food for small fish and young sport fish, disrupting the ecosystem. Spiny waterfleas are spread by attaching themselves to fishing gear and equipment. They can also be inadvertently transported in live wells, ballast water and bait buckets.

These are just a few of the aquatic invasive species found in the waters of the St. Louis River and St. Louis County—as of October 2015, 30 lakes and rivers including the St. Louis River Estuary and Lake Superior contain one or more AIS and are listed as “infested waters” (Waters of the state are designated as infested if it is determined that they contain Aquatic invasive species (AIS) that could spread to other waters—MNDNR), in St. Louis County.



For a complete list of Aquatic Invasive Species in St. Louis County and for additional information on AIS, please follow the links below:

St. Louis County,

<http://www.stlouiscountymn.gov/LANDPROPERTY/CommunityDevelopment/AquaticInvasiveSpecies.aspx>

MN Sea Grant, <http://www.seagrant.umn.edu/ais/indexand>

MN DNR, <http://dnr.state.mn.us/invasives/aquatic/index.html>

MN DNR, http://files.dnr.state.mn.us/eco/invasives/infested_waters.pdf

Maps of St. Louis County showing lakes with AIS:

<https://mail.google.com/mail/u/0/#inbox/15101c438513b0b4?projector=1>